

Eupithecia domogledana sp. nov.
from Mount Domogled, Rumania,
and a redescription of *Eupithecia salami* BRANDT, 1938
(Lepidoptera : Geometridae)

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Zusammenfassung

Eupithecia domogledana sp. nov. wurde auf dem Berg Domogled in Rumänien gefunden ; sie ist nahe mit der aus dem Iran beschriebenen *Eupithecia salami* BRANDT, 1938 verwandt, deren Kopulationsapparat auch abgebildet wird.

Summary

Eupithecia domogledana sp. nov. is described from Mount Domogled, Rumania. The species is closely related to *Eupithecia salami* BRANDT, 1938 described from Iran, to which it is compared. The genitalia of both species are figured.

Between 1979 and 1986, the junior author collected 15 specimens of a presumed new *Eupithecia* species on Mt. Domogled, a limestone mountain on the western slopes of the southern Carpathians. The description was postponed until the senior author had studied the related species, especially several described by BRANDT.

These studies showed the species to be new, but closely related to *Eupithecia salami* BRANDT, 1938, a species described from a single specimen taken in Iran. Before the new species can be described, *E. salami* must first be redescribed.

***Eupithecia salami* BRANDT, 1938**

Eupithecia salami BRANDT, 1938, Ent. Rundschau 55 (50) : 587

HOLOTYPE : ♂ "Iran, Fars Strasse Chiraz-Kazeroun Fort Sine-Sefid ca 2200 m 16.6.1937 coll. BRANDT" "E. salami BRDT. [in BRANDT's handwriting]" 145" "7957" "coll. RMS" "photo 31 F 80 det. A. VOJNITS" "Gen. prep. 18018 ♂, det. A. VOJNITS". Specimen and slide in the Rijksmuseum, Stockholm.

DIAGNOSIS. (Fig. 1) Palpi very small, shorter than two-thirds diameter of eye. Upper and outer surface of antennae brownish yellow with golden sheen, with conspicuous dark brown annulation, lower and inner surface monochromous yellow. Antennal cilia two-thirds diameter of shaft or longer.

Alar expanse of forewings of holotype 18 mm. Wings medium elongate. Forewing with costa slightly, termen hardly arcuate, dorsum straight; apex slightly elongate, tornus obtusely angulate. Ground colour pale yellow and yellowish white, brownish mainly along costa. Indistinct subbasal fascia pale fuscous, wider and interrupted towards the costa, narrower and straighter to dorsum. Antemedian and postmedian fasciae decurrent largely along subbasal fascia, both very finely arcuate. Median fascia narrow, adjacent to antemedian fascia. Discal spot small, rounded, brown, near costa. Subterminal fascia pale brown, terminal fascia whitish. Apical and terminal fields brownish, veins sparsely covered by dark brown scales. Pattern of hindwing largely agreeing with that of forewing; discal spot minute. Forewing underside yellowish, with rather marked brown discal spot, brown streak in costal field and costa itself. Hindwing underside nearly white, pattern pale fuscous. Cilia medium long, striated pale fuscous and brownish white.

GENITALIA. Male (Figs 8, 10, 12): Valva elongate, costa slightly arcuate, dorsum slightly sinuous, apex rounded. Uncus bifid, long and robust. Falces strong, clavulus large. Bristles of scopulina long. Ampulla long, bearing about 20 bristles; the majority shorter, situated on end of ampulla, the rest longer and scattered on posterior half. Sculpture on surface of pulvinulus less marked than in most Palaearctic *Eupithecia* species. Saccus semicircular. Aedeagus short and squat; everted vesica with five different sclerotized excrescences: one V-shaped, a multiple twisted formation, a larger and a smaller club-shaped one, and an incrassate part of the vesica wall itself. Sternite VIII long, tapering apicad, with a labial termination.

Female unknown.

BIOLOGY. Early stages and foodplant unknown. Imago captured middle of June.

DISTRIBUTION. Known only from the type locality: Iran, Sineh-Sefid, 2000 m.

REMARKS. The specimen described above was found amongst the type-material of the BRANDT collection, but bore no type-label. However, from the original description and accompanying photograph there is no doubt that this specimen is the holotype of *E. salami*.

***Eupithecia domogledana* sp. nov.**

HOLOTYPE : ♂ "Dom. 1986.VII.19" "gen. prep. 17811 ♂ det. A. VOJNITS".
Deposited in the "Antipa" Museum, Bucharest.

PARATYPES : 11 ♂♂ and 3 ♀♀, from Mount Domogled, all taken between 20th July 1979 and 21st July 1986 by E. SZABÓ. Deposited in the "Antipa" Museum, Bucharest (5 ♂♂, 1 ♀), coll. Endre SZABÓ, Satu Mare, (4 ♂♂, 1 ♀), and the Hungarian Natural History Museum, Budapest (2 ♂♂, 1 ♀). ♂ genitalia slides : DRAGHIA/238 ; VOJNITS/17810, 17812, 18060. ♀ genitalia slides : VOJNITS/17813, 17814, 18061.



Figs 1-6. 1. *Eupithecia salami* BRANDT, Holotype ; 2-5. *Eupithecia domogledana* sp. nov., Paratypes ; 6. Holotype.

DIAGNOSIS. (Figs 2-6) Length of palpi two-thirds of eye diameter or longer. Upper and outer surface of antennae yellow, lower and inner surface brown, with dark brown striation from middle of antennae. Antennal cilia not or hardly longer than half diameter of shaft.

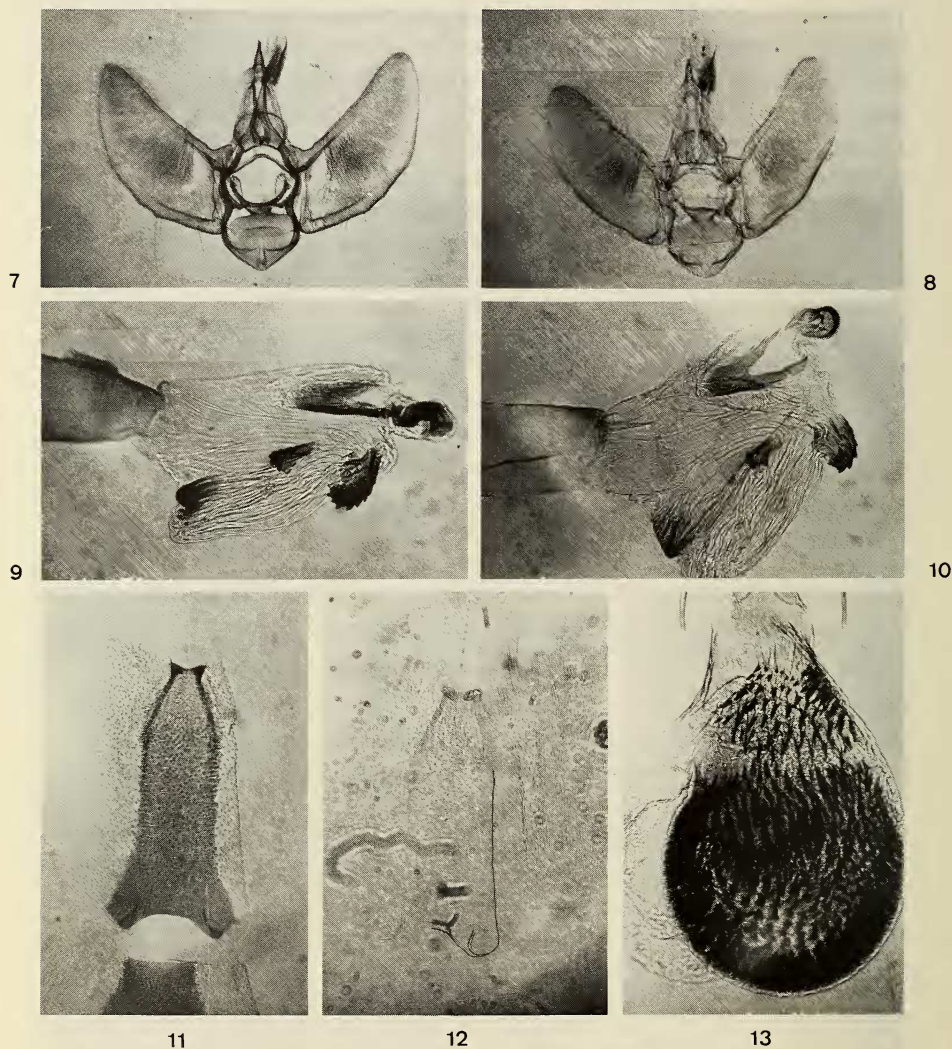
Alar expanse of forewings : ♂ 17-20 mm (mean 19 mm, n = 13) ; the 3 ♀♀ 17.5, 19.5 and 20 mm. Forewing elongate, forming an isosceles triangle. Costa arcuate at apex only, termen arcuate, dorsum straight. Tornus rounded. Hindwing short, appearing rounded, but actually obtusely angulate. Basic colour yellowish white. Forewing with subbasal fascia pale, finely arcuate, decurrent from costa to dorsum rather inwards. Antemedian and postmedian fasciae bordered by darker lines and a nearly white streak, median fascia narrow. Discal spot minute, rounded, brown, masked in some specimens by the median fascia. Subterminal fascia sinuous, white terminal fascia sinuous to discontinuous. Brown irroration denser along costa and in terminal field, a smaller or larger spot situated near apex, at one-quarter between apex and tornus. Veins locally covered by dark brown scales. Pattern of hindwing largely agreeing with that of forewing, but appearing lighter as the darker suffusion extends only to marginal field. Discal spot very small, not or hardly discernible. Underside of wings yellowish, pattern brown or brownish, more marked on forewing. Cilia medium long, shiny, striated brown and brownish-yellow. Forewings of darkest specimens also with fuscous streaks and spots along costal area in costal field, and in anterior half of postmedian fascia. Brownish-yellow underside of wings of such specimens with the dark transverse stripes wider and very distinct, cilia striated pale brown and dark brown. Some other specimens agreeing with those described above, but slightly rufous.

GENITALIA. Male (Figs 7, 9, 11) : Valva auriculate, costa arcuate, dorsum slightly sinuous, apex obtuse. Falces long, clavulus elongate. Hairs of scopolina long. Ampulla long, of even thickness, bearing 20-25 bristles, all situated on its posterior half ; the few longer ones near the midline, the rest shorter, on end of ampulla. Surface of triangular pulvinulus without sculpture. Saccus wide. Aedeagus short and thick-set. Vesica with one V-shaped, a shorter and a longer club-shaped, as well as a twisted sclerotized formation, with vesica wall also heavily sclerotized in one place. Sternite VIII elongate, tapering, slightly humeral, posteriorly labiate.

Female (Fig. 13) : Bursa copulatrix elongate, fundus wide, hemispherical, gradually attenuating distally. Ductus bursae short. Ductus seminalis thick, emanating from distal third of ductus bursae, initially proximally decurrent, but subsequently heavily twisted. Anterior and posterior apophyses thin, posterior apophyses longer. Papillae anales small and elongate.

BIOLOGY. Early stages and foodplant unknown. The adult is on the wing about the third week in July.

DISTRIBUTION. So far only found on Mt. Domogled, SW Transylvania, Rumania.



Figs 7-13. *Eupithecia domogledana* sp. nov. : 7. Male genitalia (gen. prep. VOJNITS/18060) ; 9. Everted vesica ; 11.VIII. sternite ; 13. Female genitalia (gen. prep. VOJNITS/18061). *Eupithecia salami* BRANDT : 8. Male genitalia (gen. prep. VOJNITS/18018) ; 10. Everted vesica ; 12.VIII. sternite. Due to the poor contrast, the right side of the sternite has been highlighted with ink.

Discussion

Compared to *E. salami*, the new species appears to be slightly larger, the forewing broader and hindwing shorter. The ground colour is less monochromous, the pattern heavier. The labial palpi of the new species are longer, the colouration of the antennae is different and the antennal cilia are shorter. In the male genitalia, the valva is shorter, the costa and dorsum not parallel; the falces are more elongate and the surface of the pulvinulus is not sculptured.

It is difficult to be certain of the systematic position of *E. salami* and *E. domogledana*, as many taxa from Asia Minor and the Middle East to Afghanistan, areas very rich in species, still await revision, and indeed description. Provisionally, however, they may be placed in the *graphata* "species group". As the senior author has pointed out several times in earlier papers, a modern phylogenetical system for this immense genus has not yet been proposed.

The new species, discovered in Transylvania, provides more evidence that taxa related to the xeromontane species of the Irano-Afghanistan region appear not only in Anatolia, but further westwards – though in decreasing numbers – in the eastern Mediterranean, the Balkans and even beyond. The diversity of some *Eupithecia* groups in the Irano-Afghanistan faunal area is very striking. However, many of the species occurring there are clearly very closely related morphologically. It is often not easy to decide whether they are to be regarded as species or subspecies, especially when sufficient material is lacking. The present case demonstrates how close *Eupithecia* species can be. There is insufficient evidence to consider these taxa as subspecies.

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Reference

BRANDT, W., 1938. Beitrag zur Lepidopteren-Fauna von Iran. *Ent. Rundschau* 55 (50): 584-588, Taf. III.